

March 29, 2023

Mr. Paul Jorgensen, AIA  
Associate, Project Manager  
Silver Petrucelli + Associates  
3190 Whitney Ave.  
Hamden, CT 06518

Re: Voluntown Fire Department  
Additions & Renovations  
205 Preston City Rd.  
Voluntown, CT

Dear Paul,

On March 13<sup>th</sup>, 2023, e2 engineers (Engineer) completed a condition assessment of the Voluntown Fire Department located at 205 Preston City Road, Voluntown, CT. As part of this assessment, the Engineer performed a visual inspection of the readily-accessible existing structure of the firehouse building. The Engineer also verified the floor framing of the existing attic of the west wing in the firehouse building. No destructive means were taken as part of this visual inspection.

The Voluntown Fire Department complex consists of two structures: the firehouse building closest to the main road, and the single-story detached garage building behind the firehouse. Based on the existing drawings, the firehouse was constructed in 1975, and a 2<sup>nd</sup> floor addition was constructed in 2003. An apparatus bay has been added onto the building between 1975 and 2003, but drawings of this addition were not available at the time of visit.

The existing Voluntown firehouse is a two-story building. The rear of the building consists of three full-height apparatus bays (two original with an addition). The first floor of the west wing consists of offices, storage, restrooms, a kitchen, and a multi-purpose room. The second floor of the west and center wing consists of a conference room, offices which were added on as part of the 2003 addition, and an unfinished walk-in attic space.

The apparatus bay appeared to be constructed of concrete slab-on-grade, concrete masonry walls, and wood-framed elevated floors and roofs. A small mechanical room is located below grade, but a full basement was not present.

The Engineer was not provided any existing drawings of the detached garage; however, a condition assessment of this building was not performed as it is to be demolished and replaced with a new garage.

Based on visual inspection of the existing firehouse, the concrete slab-on-grade and masonry walls appeared to be in good condition with no apparent deficiencies. Wood framing was visible in the unfinished attic space. Based on visual observation, the wood framing appeared to be in good condition.

In order to verify the adequacy of a proposed bunk room in the attic space, the existing floor trusses were measured and reviewed. A mill stamp was found on one of the trusses specifying the wood is Southern Pine #2. The trusses have been checked for 10psf dead load (floor finishes) and 40psf live load (living space) along their top chords, and 10psf dead load (ceiling finishes) along their bottom chords. They are spaced at 24" oc.

Based on the results of the Engineer's analysis, the existing trusses do not appear to be adequate for the additional occupancy loading(s).

This concludes our report. Please feel free to contact us if you have any additional questions.

Very truly yours,



R. Scott Erricson, P.E.  
Principal  
**e2 engineers**